PROPOSED RECORD OF DECISION AMENDMENT
TRACT II SITE

City of Niagara Falls / Niagara County / Registry No. 932136 / April 2010

Prepared by the New York State Department of Environmental Conservation
Division of Environmental Remediation

1.0 INTRODUCTION

On March 12, 2003, the New York State Department of Environmental Conservation (Department) signed a Record of Decision (ROD) which selected a remedy to clean up the Tract II Site. The March 2003 ROD required the excavation and off-site disposal of the upper 2 feet of soils and waste fill within the eastern portion of the site, along with the demolition and removal of the remaining site buildings. In 2008/09, as part of the remedial design process, the Department conducted extensive pre-design sampling of the waste and fill materials present at the site. This sampling indicated that the waste materials on the eastern portion of the site contain lead concentrations in excess of hazardous waste criteria. Furthermore, in the eastern portion of the site, the waste exhibits hazardous waste characteristics (for lead) throughout its full depth (up to 9 feet below grade). With recognition of the new data, the Department proposes the excavation and on-site stabilization of the lead contaminated waste materials in the eastern portion of the site, followed by proper off-site disposal of all eastern waste and fill materials which are above 6 NYCRR Part 375 Residential Soil Cleanup Objectives (SCOs). In addition, the two highly deteriorated site buildings would be demolished, with the clean hard fill debris (concrete and brick) either re-used as on-site backfill, or disposed off-site at an appropriate disposal facility.

A public comment period has been set for April 21, 2010 - May 20, 2010 to provide an opportunity for you to comment on these proposed changes. A public meeting is scheduled for April 26, 2010 at the Doris W. Jones Family Resource Building beginning at 6:00pm.

At the meeting, a description of the original ROD and the circumstances that have led to proposed changes in the ROD will be presented. After the presentation, a question and answer period will be held, during which you can submit verbal or written comments on the proposal. We encourage you to review this summary and attend the meeting.

Written comments may also be sent to:

Jeff Konsella, Project Manager
New York State Department of Environmental Conservation
Division of Environmental Remediation
270 Michigan Avenue
Buffalo, NY 14203
(716) 851-7220

Comments will be summarized and responses provided in a Responsiveness Summary.

The information here is a summary of what can be found in greater detail in reports that have been

placed in the Administrative Record for the site. These documents are available at the following repositories:

Doris W. Jones Family Resource Bldg.
3001 Ninth Street
Niagara Falls, NY 14304
Hours: Mon, Wed, Fri: 9am-5pm
Tues, Thurs: 9am-8pm

NYSDEC Region 9 Offices
Contact: Jeff Konsella, Project Manager
270 Michigan Avenue
Buffalo, NY 14203
(716) 851-7220
Hours: Mon.- Fri. 8:30am - 4:45pm

The Department may modify or reject the proposed changes based on new information or public comments. Therefore, the public is encouraged to review and comment on this proposal.

2.0 SITE INFORMATION

2.1 Site Description

The Tract II site is located in the City of Niagara Falls, Niagara County (see Figure 1). The site is approximately 20 acres in size and is bordered on the west side by Highland Avenue and on the south side by Beech Avenue. The site is bordered on the east side by a residential area, which includes homes, an elementary school, and churches. The site is bordered on the north side by the Power City Warehouse site (#932131), which was a lead-acid battery manufacturing facility for over 75 years. National Grid owns a narrow strip of land (approximately 60 feet wide) running north from 15th Street, which bisects the Tract II site into western and eastern site portions (see Figure 2 and 3).

The site is relatively flat and covered with grasses, brush, and trees. The remains of a partially underground parking garage is present in the western portion of the site along Beech Avenue. The eastern portion of the site is typically overgrown with thick brush and trees, and a partially collapsed and severely dilapidated single story warehouse building is present in the north-eastern portion of the site.

The site has varying depths of fill material over the native soils. The western portion of the site contains only a few feet of fill, consisting mostly of brick, concrete, sand, etc. The eastern portion of the site contains waste and fill to a depth of up to 9 feet. Waste material in the eastern portion of the site contains a dark colored granular material and it is mixed with wood, brick, concrete, and in some areas, the remains of plastic automotive battery casings. The waste and fill materials in the eastern portion of the site are believed to have originated from activities associated with the adjacent Power City Warehouse site. In addition, there has been significant illegal disposal of household items along the north-east portion of the site. These household wastes include numerous TVs and other items which may have contributed to the contaminants detected in surface soils in the far northeastern portion of the site.

Underlying the waste and fill materials (at depths starting from 1-9 feet below the surface) is the

native reddish clay soil which extends to the top of bedrock (which occurs at depths from 12-24 feet). With the exception of some very limited areas of perched groundwater, there is no overburden groundwater present at the site.

2.2 Site History

The western portion of the Tract II site was once home to a series of business form manufacturing companies (from 1903-1971). The eastern portion of the Tract II site is believed to have been either directly or indirectly associated with the former manufacturing activities at the adjacent Power City Warehouse. The City currently owns both the Tract II and Power City Warehouse sites (through tax foreclosures).

A site investigation was completed by the City under the Environmental Restoration Program (ERP site #B00022) in 2000, and a Record of Decision was issued by the Department in March 2003. The primary site contaminants identified in the ROD were metals and PAHs in site soils. The remedial actions outlined in the ROD included:

- Removal of the upper 2 feet of contaminated soils within the eastern portion of the site;
- Excavation and disposal of the soils at an approved off-site disposal facility
- Placement of clean soil materials within excavation areas;
- Demolition and disposal of debris associated with the remaining site structures; and
- Development of a Soils Management Plan and the imposition of an Environmental Easement to restrict future use of the property.

The City elected not to proceed under the ERP and implement the ROD. In order to proceed with the necessary remediation, the site was listed in the Registry as site No. 932136 and classified as a Class 2 site.

2.3 Nature and Extent of Site Contamination

As described in the original ROD and other documents, many soil samples were collected at the site to characterize the nature and extent of contamination. The primary contaminants of concern include: metals (lead), and semi-volatile organic compounds (polycyclic aromatic hydrocarbons).

Soils

The Remedial Investigation (RI), completed in 2000, used test pits and soil borings (for monitoring well installation) to characterize soil, fill, and waste types and depths. In general, fill materials (sand, brick, concrete, and wood) were found in most areas of the site from 0-1 foot below grade. Fill materials were generally about 1 foot thick in the western portion of the site. Waste materials

(primarily dark granular material and broken plastic battery casings) mixed with fill were present in the eastern portion of the site up to a depth of about 9 feet. Both surface soils (0-0.5 feet) and shallow subsurface (0-2 feet) waste and fill sampled during the RI showed elevated levels of lead (up to 32,000 ppm) and PAHs (benzo-a-pyrene and chrysene up to 29 ppm).

Groundwater

The Remedial Investigation included the installation and sampling of several groundwater monitoring wells at the site. The wells were installed into bedrock, since neither the fill materials or the underlying silt and clay soils were saturated. No significant concentrations of site contaminants were detected in site groundwater.

Former Buildings

Two former buildings are present on the site. On the western portion, there is a partially underground, single story structure approximately 80,000 square feet in size. This structure was the parking garage and foundation for the former business form manufacturing facility. On the northeastern portion of the site, there are the remains of a partially collapsed warehouse structure that was believed to be associated with the adjacent Power City battery manufacturing facility.

The Remedial Investigation completed in 2000 noted approximately 4,750 linear feet of asbestos pipe insulation in the parking garage. In addition, a concrete sump containing sludge and water was noted in the garage. The sludge in that sump had PCB concentrations of 31,000 ppm, while the sump water contained PCBs at 30 ppb. The majority of the former warehouse building is empty and the structure is severely deteriorated. Asbestos containing materials and a few unknown containers are mixed with the debris in the collapsed portion of the building.

In late 2009, the United States Environmental Protection Agency (EPA) completed a removal of the PCB contaminated sludge and water from the underground parking garage. The EPA also placed fencing around the two remaining site structures to reduce trespassing. It is expected that in 2010, the EPA will also perform asbestos abatement on the parking garage and/or the partially collapsed warehouse building.

2.4 Summary of Human Exposure Pathways

This section describes the types of human exposures that may present added health risks to persons at or around the site. A more detailed discussion of the human exposure pathways can be found in Section 5 of the August 2000 Site Investigation and Remedial Alternatives Report, which is available for review at the document repository.

An exposure pathway describes the means by which an individual may be exposed to contaminants originating from a site. An exposure pathway has five elements: [1] a contaminant source, [2] contaminant release and transport mechanisms, [3] a point of exposure, [4] a route of exposure, and [5] a receptor population.

The source of contamination is the location where contaminants were released to the environment (any waste disposal area or point of discharge). Contaminant release and transport mechanisms

carry contaminants from the source to a point where people may be exposed. The exposure point is a location where actual or potential human contact with a contaminated medium may occur. The route of exposure is the manner in which a contaminant actually enters or contacts the body (e.g., ingestion, inhalation, or direct contact). The receptor population is the people who are, or may be, exposed to contaminants at a point of exposure.

An exposure pathway is complete when all five elements of an exposure pathway exist. An exposure pathway is considered a potential pathway when one or more of the elements currently does not exist, but could in the future.

Completed pathways known to or that may exist at the site include:

- direct contact with contaminated soils and waste materials;
- incidental ingestion of contaminated soils and wastes; and
- inhalation of dusts associated with contaminated surface soils.

The site is located in a heavily industrialized section of Niagara Falls with a residential area nearby. There is the potential for trespassers to come in contact with contaminated soil. All nearby residents are served by public water (the City of Niagara Falls prohibits the use of groundwater as a drinking water source) so exposures via drinking water are not expected.

2.5 Summary of Environmental Assessment

Given the highly urbanized area in the vicinity of the Tract II Site, wildlife resources are limited. The eastern portion of the site contains thick brush, and this cover offers wildlife habitat for birds and other small animals. Wildlife at the site may come into contact with general household refuse and construction demolition and debris that has been disposed on the surface of the site. In addition, surface soils in the eastern portion of the site contain high concentrations of PAHs and metals. Burrowing animals may also come in contact with waste and fill materials containing high concentrations of lead.

Site groundwater has not been impacted. There is little overburden groundwater present due to the low permeability native soils. The native overburden soils are primarily comprised of silty clay. Native soils are present as shallow as 1 foot below grade on the western portion of the site and as deep as 9 feet below grade on the eastern portion of the site.

2.6 Original ROD Remedy

Based on the results of the RI/FS for the site, the March 2003 ROD for the site included the following major elements:

- A remedial design program to verify the components of the conceptual design and provide the details necessary for the construction, operation, maintenance, and/or monitoring of the remedial program. Any uncertainties identified during the RI/FS will be resolved during the design process.

- Excavation and off-site disposal of contaminated soils from the east area of the site including six inch deep surface soils (estimated at 5,250 cubic yards) and shallow subsurface soils up to a depth of 2 feet (estimated at 7,875 cubic yards), and replacement with clean soil fill (estimated at 13,125 cubic yards);

- Excavation and off-site disposal of contaminated soil (partially burned cardboard waste) from an area on the western portion of the site and replacement with clean soil fill (estimated at 7.5 cubic yards);

- Removal and off-site disposal of sediments and water (estimated at 5 cubic feet) from the parking garage sump;

- Removal and off-site disposal of asbestos containing materials (estimated at 210 tons) from the parking garage and dilapidated warehouse building;

- Demolition of the parking garage and the dilapidated (northeastern) building;

- Removal and disposal of general refuse deposited on the surface of the site;

- Site restoration to include grading, topsoil placement and seeding of excavated and/or filled areas;

- Development of a soils management plan; and

- Imposition of a deed restriction if warranted due to residual soil contaminants remaining after remedial actions are completed.

3.0 DESCRIPTION OF PROPOSED CHANGES

3.1 New Information

Pre-design soil sampling was completed in July 2009. Test pits were excavated into areas throughout the site, and the waste and fill materials were sampled at various intervals to vertically profile the contamination. The 2009 pre-design sampling has confirmed the presence of characteristic hazardous waste (lead) in the waste and fill at depths up to 9 feet below grade in the eastern portion of the site (see Table 1). The results of these pre-design activities are contained in the October 2009 Supplemental Investigation Report. Based upon that report, an estimated 45,000 cubic yards (91,000 tons) of waste and fill materials are present on the eastern portion of the site, and nearly all of this waste and fill material contains lead in concentrations greater than Part 375 residential use soil cleanup objectives. In addition, it is estimated that approximately 50% of this fill material has lead concentrations high enough to be classified as characteristic hazardous waste (based upon TCLP criteria).

3.2 Alternatives Considered

The remedy contained in the 2003 ROD was based upon limited soil, waste, and fill sampling. That

sampling suggested that lead and PAH contaminants were limited to the upper 2 feet of the site surface. The October 2009 Supplemental Investigation Report (SRI) has documented the presence of large quantities of characteristic hazardous waste materials in the eastern portion of the site. This characteristic hazardous waste is mixed with, and distributed throughout the fill materials on the eastern portion of the site. The SRI estimated that there is approximately 45,000 cubic yards of characteristic hazardous waste present in the eastern portion of the site. It is therefore necessary to amend the 2003 ROD to address the characteristic hazardous waste that is present on the site.

Three potential remedial alternatives were considered to address the hazardous waste on the eastern portion of the site (all three alternatives would retain the 2003 ROD remedy for the western portion of the site). These three alternatives include: 1) removal of the severely dilapidated building, with a clean soil cover system; 2) removal of the building, excavation and on-site treatment of the characteristic hazardous waste materials, return of the treated material to the excavations, with construction of a clean soil cover system; 3) removal of the building, excavation and on-site treatment of the characteristic hazardous waste materials, off-site disposal of the treated materials, with clean soil and clean building debris backfill in the excavation areas.

Alternative 1: Removal of the Building, with Construction of a Clean Soil Cover System

This alternative would demolish and remove all materials associated with the severely dilapidated building in the northeastern portion of the site. Since the surface soils and subsurface waste and fill materials contain high concentrations of lead, a clean soil cover system with a grass surface would be constructed over the eastern portion of the site. The cover system, along with appropriate institutional controls, would prevent direct human contact with contaminated waste and fill materials. The institutional controls would include a site management plan to ensure that any future use of the site was compatible with the remedy. An environmental easement would also be implemented, which would required periodic certification of the institutional controls. This alternative could be completed within 6-8 months of award of the remedial construction contract .

Present Worth:	$1,637,000
Capital Cost:	$1,560,000
Annual O&M:	$5,000

Alternative 2: Removal of the Building, with Excavation, On-site Treatment, and replacement of the Waste Materials to the Site, and Construction of a Clean Soil Cover System

This alternative would demolish and remove all materials associated with the severely dilapidated building in the northeastern portion of the site. It would also require the excavation and on-site treatment of all characteristic hazardous waste materials within the eastern site fill. Following the on-site treatment of the waste materials to reduce leachability, the treated materials would be returned to the excavation areas. Since these treated materials would still contain high concentrations of lead, a clean soil cover system with a grass surface would be constructed over the eastern portion of the site. The cover system, along with appropriate institutional controls, would prevent direct human contact with lead contaminated waste and fill materials. The institutional controls would include a site management plan to ensure that any future use of the site was compatible with the remedy. An environmental easement would also be implemented, which would required periodic certification of the institutional controls. This alternative could be completed

within 12-18 months of the award of the remedial construction contract.

Present Worth: $9,077,000
Capital Cost: $9,000,000
Annual O&M: $5,000

Alternative 3: Removal of the Building, with Excavation, On-site Treatment, and Off-Site Disposal of all Fill and Waste Materials Above Residential SCOs, with Clean Soil and Clean Building Debris Backfill of the Excavation Areas, and a Grass Surface

This alternative would demolish the severely dilapidated building in the northeastern portion of the site. It would also require the excavation and on-site treatment of all characteristic hazardous waste materials within the eastern site fill. Following the on-site treatment of the waste materials to reduce leachability, all waste and fill materials with lead concentrations above residential SCOs would be disposed at an appropriate off-site facility. The excavated areas would be back filled with clean soils and clean building debris. This alternative could be completed within 12-18 months of the award of the remedial construction contract.

Present Worth: $12,800 ,000
Capital Cost: $12,770,000
Annual O&M: $2,000

4.0 EVALUATION OF PROPOSED CHANGES

4.1 Remedial Goals

Goals for the cleanup of the site were established in the original ROD. The goals selected for this site are:

- Reduce, control, or eliminate to the extent practicable the contamination present within the soils, wastes, and refuse on the site;
- Provide for the attainment of SCGs for soil, to the extent practicable;
- Eliminate the potential for direct human contact with, or ingestion/inhalation of contaminated soils, wastes, and refuse on the site;
- Eliminate the physical hazards posed by the former warehouse building and parking garage; and
- Facilitate site redevelopment.

4.2 Evaluation Criteria

The criteria used to compare the remedial alternatives are defined in the regulation that directs the remediation of inactive hazardous waste sites in New York State (6 NYCRR Part 375). For each criterion, a brief description is provided. A detailed discussion of the evaluation criteria and

comparative analysis is contained in the Focused Feasibility Study.

Since all three alternatives considered would include the original 2002 ROD elements for the western portion of the site (and soil and fill materials within the western portion of the site currently meet Part 375 restricted commercial SCOs), the following evaluations discuss and compare alternatives with respect to the actions on the eastern portion of the site.

The first two evaluation criteria are called threshold criteria and must be satisfied in order for an alternative to be considered for selection.

1. Protection of Human Health and the Environment. This criterion is an overall evaluation of each alternative's ability to protect public health and the environment.

Alternatives 1, 2, and 3 would offer similar protection for human health. The cover system of alternatives 1 and 2, combined with appropriate maintenance and institutional controls, would be as protective of human health as the complete removal of waste and fill that would be required in alternative 3. Alternative 3 would be slightly more protective of the environment than alternatives 1 and 2, since the contaminated waste and fill material would be removed and disposed at an appropriate off-site facility. The original remedy would have offered protections similar to those of alternatives 1 and 2. Under the original remedy, future uses of the site could have resulted in human health or environmental exposure pathways.

2. Compliance with New York State Standards, Criteria, and Guidance (SCGs). Compliance with SCGs addresses whether a remedy will meet environmental laws, regulations, and other standards and criteria. In addition, this criterion includes the consideration of guidance which the Department has determined to be applicable on a case-specific basis.

In 2003, the original ROD used NYSDEC Division of Environmental Remediation TAGM-4046- "Determination of Soil Cleanup Objectives and Cleanup Levels" for the soil cleanup objectives. These cleanup objectives were superceded in December 2006 by the soil cleanup objectives contained in 6NYCRR Part 375.

Since alternative 1 would not treat or remove the characteristic hazardous waste present at the site, it would not satisfy all SCGs. Alternative 2 would treat the characteristic hazardous waste, but high concentrations of lead (above Part 375 Restricted Industrial criteria) would remain in the waste and fil materials. As such, alternative 2 would not comply with all SCGs. Alternative 3 would comply with all SCGs.

The next five "primary balancing criteria" are used to compare the positive and negative aspects of each of the remedial strategies.

3. Short-term Effectiveness. The potential short-term adverse impacts of the remedial action upon the community, the workers, and the environment during the construction and/or implementation are evaluated. The length of time needed to achieve the remedial objectives is also estimated and compared against the other alternatives.

There would be some limited short term impacts on the nearby homeowners and on the site workers

under all three alternatives. These impacts (dust, noise, vibrations, etc.) could be mitigated by proper controls and construction techniques. In addition, alternative 3 would include similar short term impacts related to the off-site disposal of the waste and fill materials. Alternative 1 is estimated to take between 6-8 months (one construction season), while alternatives 2 and 3 are estimated to take 12-18 months (two to three construction seasons) to complete.

The original remedy would have had similar short term impacts, but the duration of the impacts would have been shorter. The work needed for the original remedy could have been completed in 6-8 months.

4. Long-term Effectiveness and Permanence. This criterion evaluates the long-term effectiveness of the remedial alternatives after implementation. If wastes or treated residuals remain on-site after the selected remedy has been implemented, the following items are evaluated: 1) the magnitude of the remaining risks, 2) the adequacy of the engineering and/or institutional controls intended to limit the risk, and 3) the reliability of these controls.

Alternative 3 would offer the greatest long-term effectiveness and permanence since it would remove and dispose all of the waste and fill materials on the eastern portion of the site with lead concentrations above residential SCGs. In addition, the characteristic hazardous waste materials would be treated to reduce the concentrations of leachable lead before disposal at a permitted facility. An environmental easement would not be required for the eastern portion of the site since: residential use SCOs would be achieved (and protection of ecological resource SCOs are not applicable); there is no groundwater contamination at the site (and there is a prohibition on groundwater use as potable water in the City of Niagara Falls); and the property is not likely to be used for commercial agricultural use, raising livestock, or producing animal products.

Alternative 2 would offer the next highest level of long-term effectiveness and permanence since it would treat the waste and fill materials to reduce the concentrations of leachable lead. Since high concentrations of total lead would remain within site soils, institutional controls and an environmental easement would be required to ensure that future uses of the property are consistent with the intended future use (active recreational).

Alternative 1 would offer the least long-term effectiveness and permanence since no treatment of the characteristic hazardous waste would occur. The long term effectiveness of alternatives 1 and 2 would be dependent on the proper maintenance of a cover system and the institutional controls.

The original remedy would have required removal and disposal of only the upper two feet of fill materials, and would not have addressed the majority of characteristic hazardous waste present at the site. As such, the original remedy would not have provided the same permanence. The original remedy could have provided long term effectiveness similar to alternatives 1and 2.

5. Reduction of Toxicity, Mobility or Volume. Preference is given to alternatives that permanently and significantly reduce the toxicity, mobility or volume of the wastes at the site.

Alternative 3 would permanently and significantly reduce the toxicity and mobility of the lead contamination since the waste and fill material would be treated and then disposed at an appropriate off-site facility. Alternative 2 would offer some reductions in the mobility of the lead contaminants

since the waste and fill materials would be treated to reduce potential leachability. However, the treatment of waste and fill material under Alternative 2 would not effect the toxicity or overall volume of those lead contaminated materials. Alternative 1 would not result in any reductions in toxicity, mobility, or volume of the lead contaminated waste and fill materials.

Alternatives 3 and 2 would require a treatability study to confirm the effectiveness and treatment parameters for any proposed stabilization treatment methods.

The original remedy would not have resulted in significant reductions in the toxicity, mobility, and volume of the site contaminants since it would not have addressed the majority of the lead contamination. The original remedy would have left a large volume of characteristic hazardous waste at the site.

6. Implementability. The technical feasibility and administrative feasibility of implementing each alternative are evaluated. Technical feasibility includes the difficulties associated with the construction of the remedy and the ability to monitor its effectiveness. For administrative feasibility, the availability of the necessary personnel and materials is evaluated along with potential difficulties in obtaining specific operating approvals, access for construction, institutional controls, and so forth.

The equipment, materials, and facilities needed for all three alternatives are readily available. Excavation, on-site treatment methods, transportation, and disposal facilities for these types of contaminated wastes and fill materials are available. No significant technical or administrative difficulties have been identified. A treatability study would be necessary to confirm the effectiveness and treatment parameters of any stabilization alternative prior to implementation of full scale on-site material treatment.

The original remedy was also readily implementable.

7. Cost-Effectiveness. Capital costs and annual operation, maintenance, and monitoring costs are estimated for each alternative and compared on a present worth basis. Although cost-effectiveness is the last balancing criterion evaluated, where two or more alternatives have met the requirements of the other criteria, it can be used as the basis for the final decision.

The estimated present worth of the three alternatives are as follows:

Alternative 1: $ 1,637,000
Alternative 2: $ 9,077,000
Alternative 3: $12,800,000

While there would be somewhat greater annual O&M costs for alternatives 1 and 2 (estimated at $5000/year) than for alternative 3 (estimated at $2000/year), the O&M costs for the three alternatives are not significant when compared to the capital costs. The estimated present worth cost of the original remedy in 2003 dollars was $3,040,000.

This final criterion is considered a modifying criterion and is considered after evaluating those above. It is focused upon after public comments on the proposed ROD amendment have been received.

8. Community Acceptance. Concerns of the community regarding the proposed changes are evaluated. A responsiveness summary will be prepared that describes public comments received and the manner in which the Department will address the concerns raised. If the final remedy differs significantly from the proposed remedy, notices to the public will be issued describing the differences and reasons for the changes.

5.0 SUMMARY OF PROPOSED CHANGES

The Department is proposing to amend the Record of Decision (ROD) for the Tract II Site. The proposed change is necessary since the supplemental investigation sampling has determined that there are approximately 45,000 cubic yards of waste and fill materials with contaminants significantly above Part 375 residential SCOs. It is estimated that approximately 50% of this waste and fill material contains characteristic hazardous waste concentrations of lead.

The Department is therefore proposing Alternative 3 as the amended remedy for the site. The excavation and treatment/disposal of the eastern contaminated waste and fill materials above residential SCOs would be protective of human health and the environment, achieve the soil cleanup objectives, and do so within a reasonable time frame. It would also be effective and result in the permanent reduction in toxicity, mobility, and volume of soil contaminants.

The estimated present worth cost to carry out the amended remedy is $12,800,000. The costs projected for the original remedy were approximately $3,040,000.

The elements of the proposed amended remedy are as follows:

1. A remedial design program to verify the components of the conceptual design and provide the details necessary for the construction of the remedial program;

2. Excavation of contaminated waste and fill materials from the eastern portion of the site;

3. On-site treatment of waste and fill materials from the eastern portion of the site containing contaminant concentrations above characteristic hazardous waste criteria;

4. Off-site disposal of treated waste and fill materials from the eastern portion of the site which are above Part 375 residential SCOs;

5. Backfill and grading of the eastern excavation areas with available clean concrete and brick building debris, supplemented as needed with clean backfill soils meeting Part 375 Residential SCOs;

6. In place demolition of the underground parking garage on the western portion of the site;

7. To maximize the net environmental benefit, Green remediation and sustainability efforts are considered in the design and implementation of the remedy to the extent practicable, including;
   - using renewable energy sources
   - reducing green house gas emissions

- encouraging low carbon technologies
- foster green and healthy communities
- conserve natural resources
- increase recycling and reuse of clean materials
- preserve open space and working landscapes
- utilize native species and discourage invasive species establishment during restoration
- promote recreational use of natural resources
- design cover systems to be usable for habitat or recreation
- design storm water management systems to recharge aquifers

8. Imposition of an institutional control in the form of an environmental easement for the western portion of the property that:

(a) requires the remedial party or site owner to complete and submit to the Department a periodic certification of institutional and engineering controls in accordance with Part 375-1.8 (h)(3).;

(b) land use is subject to local zoning laws, the remedy allows the use and development of the western portion of the controlled property for commercial and industrial uses;

(c) restricts the use of groundwater as a source of potable or process water, without necessary water quality treatment as determined by the Department, NYSDOH, County DOH, or City Authority;

(d) prohibits agricultural or vegetable gardens on the controlled property; and

(e) requires compliance with the Department approved Site Management Plan;

9. Since the remedy results in contamination remaining at the site that does not allow for unrestricted use, a Site Management Plan is required, which includes the following:

(a) an Institutional Control Plan that identifies all use restrictions for the site and details the steps and media-specific requirements necessary to assure the institutional controls remain in place and effective. This plan includes, but may not be limited to:

(i) Soil Management Plan for the western portion of the site which details the provisions for management of future excavations in areas of remaining contamination;
(ii) descriptions of the provisions of the environmental easement for the western portion of the site including any land use restrictions;
(iii) maintaining site access controls and Department notification; and
(iv) the steps necessary for the periodic reviews and certification of the institutional and/or engineering controls.

6.0 NEXT STEPS

As described above, there will be a public meeting and comment period on the proposed changes to the selected remedy. At the close of the comment period, the Department will evaluate the comments received and prepare a responsiveness summary which will be made available to the public. A notice describing the Department's final decision will be sent to all persons on the site mailing list.

If you have questions or need additional information you may contact any of the following:

General Site Related Questions, Contact:

Jeff Konsella, Project Manager
NYSDEC
270 Michigan Avenue
Buffalo, NY 14203
(716) 851-7220
Hours: M-F 8:30AM - 4:45PM

Mark Baetzhold, Citizen Participation Spec.
270 Michigan Avenue
Buffalo, NY 14203
(716) 851-7220
Hours: M-F 8:30AM - 4:45PM

For Health Related Questions, Contact:

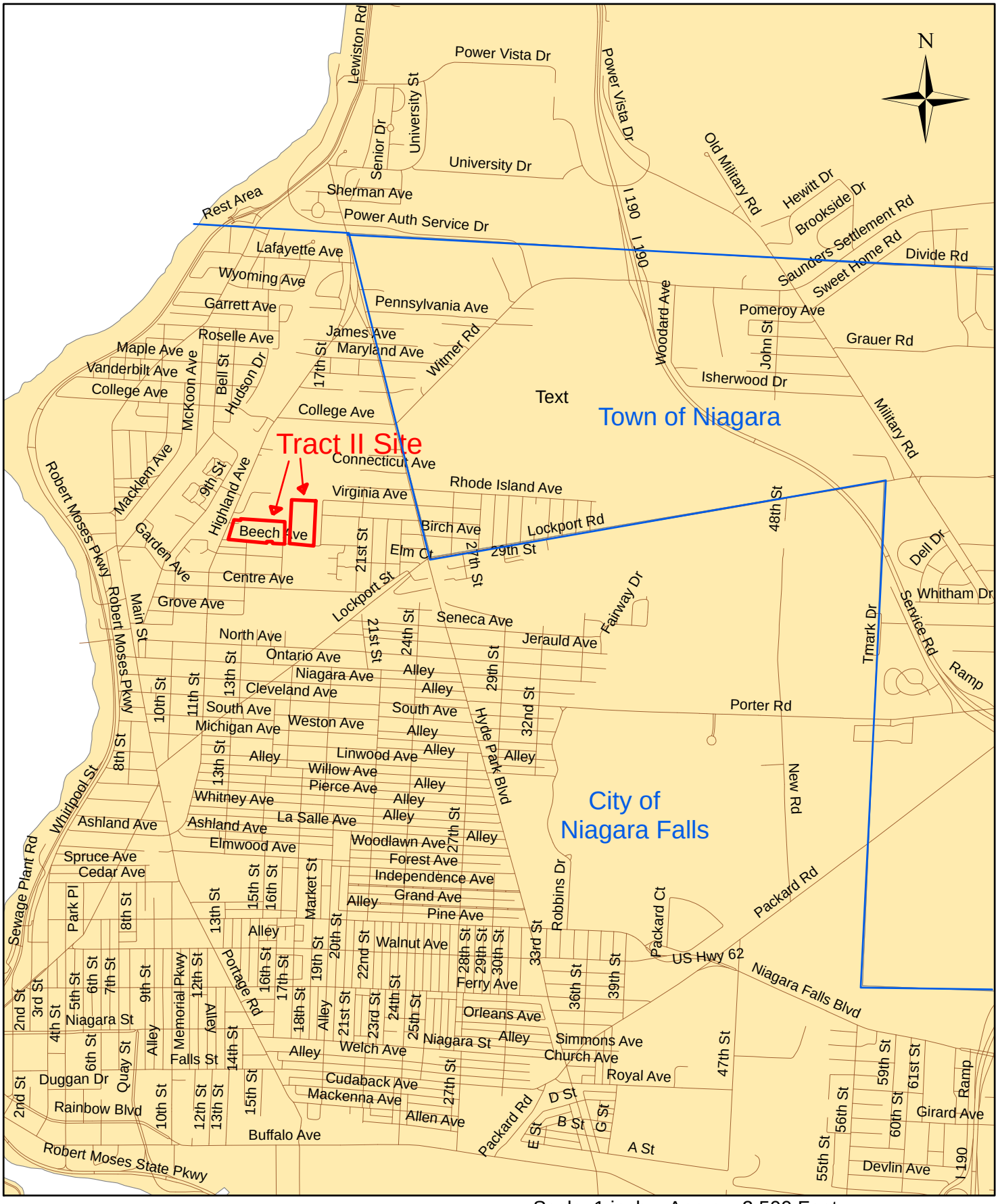
Matt Forcucci, Public Health Specialist III
NYSDOH
584 Delaware Avenue
Buffalo, NY 14202
(716) 847-4385

Table 1
Tract II Site (#932136)
Lead Results in July 2009 Soil Sampling

Soil depth Interval in Feet	Total Lead Concentration Range (ppm)	Number at Depth Interval Above Part 375 Unrestricted Use SCOs	Number at Depth Interval Above Part 375 Restricted Residential Use SCOs	TCLP Lead Concentration Range (ppm)	Number at Depth Interval Above TCLP Criteria (5 ppm)
2	580 - 24,000	14 of 14	14 of 14	0.5 - 570	2 of 4
3	190 - 46,000	12 of 12	11 of 12	2.2 - 7.8	1 of 4
4	530 - 99,000	9 of 9	9 of 9	10 - 150	4 of 4
5	240 -110,000	8 of 8	7 of 8	4.4 - 52	1 of 2
6	13,000 - 140,000	6 of 6	6 of 6	210 - 720	2 of 2
7	77,000 - 100,000	2 of 2	2 of 2	560	1 of 1
8	7,300 - 48,000	2 of 2	2 of 2		
9	84	1 of 1	0 of 1		
Cleanup Objective - Unrestricted	63 ppm				
Total number of locations above Unrestricted Use SCOs	54 of 54				
Cleanup Objective - Restricted Residential	400 ppm				
Total number of locations above Restricted Residential Use SCOs	51 of 54				

Note: All concentrations in parts per million (ppm)

Figure 1 - Tract II Site Location



Scale: 1 inch = Approx. 2,500 Feet

Figure 2 - Tract II Site Location

Scale: 1 inch = Approx. 800 Feet

N

LEGEND

SS–1 SURFACE SOIL SAMPLE

TP–1 TEST PIT

TRACT II SITE BOUNDARY

LOT BOUNDARY WITHIN SITE

LARGE BUILDING/STRUCTURE OUTLINE

585 GROUND SURFACE ELEVATION/CONTOUR

RAILROAD TRACKS

INDUSTRIAL PROPERTIES LLC, R.O.
T.M. 130.19–1–2.1

TULIP CORPORATION
T.M. 144.06–2–1

2 STORY BRICK BUILDING (DILAPIDATED)

CITY OF NIAGARA FALLS, NEW YORK, R.O.
T.M. 144.06–2–2

CITY OF NIAGARA FALLS, NEW YORK, R.O.
T.M. 144.06–2–27

CITY OF NIAGARA FALLS, NEW YORK, R.O.
T.M. 144.06–2–26

CITY OF NIAGARA FALLS, NEW YORK, R.O.
T.M. 144.06–2–25

1/2 STORY CONCRETE FOUNDATION/BELOW GRADE PARKING GARAGE

NATIONAL GRID, R.O.
T.M. 130.18–2–13

HIGHLAND AVENUE

BEECH AVENUE

BEECH AVENUE

LOT 218 LOT 217 LOT 216 LOT 215 LOT 214 LOT 213 LOT 212 LOT 211 LOT 210 LOT 209 LOT 208 LOT 207 LOT 206 LOT 205 LOT 204 LOT 203 LOT 202 LOT 201

GRAPHIC SCALE
(IN FEET)
1 inch =100 ft.

TRACT II SITE (#932136)	NYSDEC Environmental Remediation
Niagara Falls, NY	
TEST PIT/SAMPLING LOCATIONS	FIGURE 3